

LP-OSFPBX02DWF2
LC Simplex 10GBASE-BX SM Singlemode Fiber SFP+ WDM, Tx1490nm/Rx1550nm
MSA Transceiver up to 80km.

LPOSFPBX02DWF2_SS_ENB01W

Features

- Up to 10Gbps data links.
- 80Km with 9/125µm SMF *1.
- WDM TX1490/RX1550nm EML laser.
- Simplex LC Connector.
- Hot-pluggable SFP+ footprint.
- Single 3.3V power supply.
- Operating temperature: 0°C to 70°C (Industrial Standard -40 ~ 85 °C).
- RoHS.
- Digital Diagnostic Monitor (DDM).

Applications

- 10GBase Ethernet.
- 10G FC.
- Other optical links.



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Tx1490nm/Rx1550nm MSA Transceiver up to 80km.

LP-OSFPBX02DWF2 is a 10Gbps enhanced small form factor pluggable SFP+ transceiver compatible with 10GBASE Ethernet and 10G Fiber Channel. It is suitable for singlemode fiber (SMF) communications in 10Gbps Ethernet and 10G Fiber Channel by single fiber.



A Absolute maximum rating

These values represent the damage threshold of the module. Stress in excess of any of the individual Absolute Maximum Ratings can cause immediate catastrophic damage to the module even if all other parameters are within Recommended Operating Conditions.

Parameters	Symbol	Min.	Max.	Unit
Supply Voltage	V_{cc}	-0.5	+4	V
Storage Temperature	T_c	-40	+85	°C
Operating Case Temperature	T_c	0	+70	°C
Relative Humidity	RH	-40	85	%

B Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max	Unit
Supply Voltage	V_{cc}	3.15	3.3	3.45	V
Supply Current	I_{cc}	-	-	400	mA
Data Rate	T_c	0	25	70	°C
Module Power Dissipation		-	10	-	Gbps
Max Link Length on 9/125 μ m SMF	L_{max}	80Km			

C Electrical characteristics

Parameter	Symbol	Min.	Typical	Max	Unit
Transmitter					
Input differential impedance	Z_{in}	90	100	110	Ω
Single ended data input swing	V_{in}	250	-	1200	mV
Transmit Disable Voltage	VD	2	-	VCC	V
Transmit Enable Voltage	VEN	0	-	0.8	V
Receiver					
Single ended data output swing	V_{out}	250	-	800	mV
LOS Fault	VLOS fault	2	-	VCCHOST	V
LOS Normal	VLOS norm	0	-	Vee+0.8	V
Output rise and fall time	T_r, T_f	30			ps

D Optical characteristics

Parameter	Symbol	Min.	Typical	Max	Unit
Transmitter					
Optical Wavelength	λ_C	1480	1490	1500	nm
Spectral Width(-20dB)	σ	-	-	1	nm
Average Output Power	Pout	0	-	5	dBm
Extinction Ratio	ER	8	-	-	dB
Average Power of OFF Transmitter	Poff	-	-	-30	dBm
Receiver					
Centre Wavelength	λ_C	1540	1550	1560	nm
Receiver Sensitivity	PIN	-	-	-24	dBm
Receiver Overload	Pmax	-7	-	-	dBm
LOS De-Assert	LOSD	-	-	-28	dBm
LOS Assert	LOSA	-30	-	-	dBm
LOS Hysteresis	-	0.5	-	4.5	dB

E Pin Descriptions

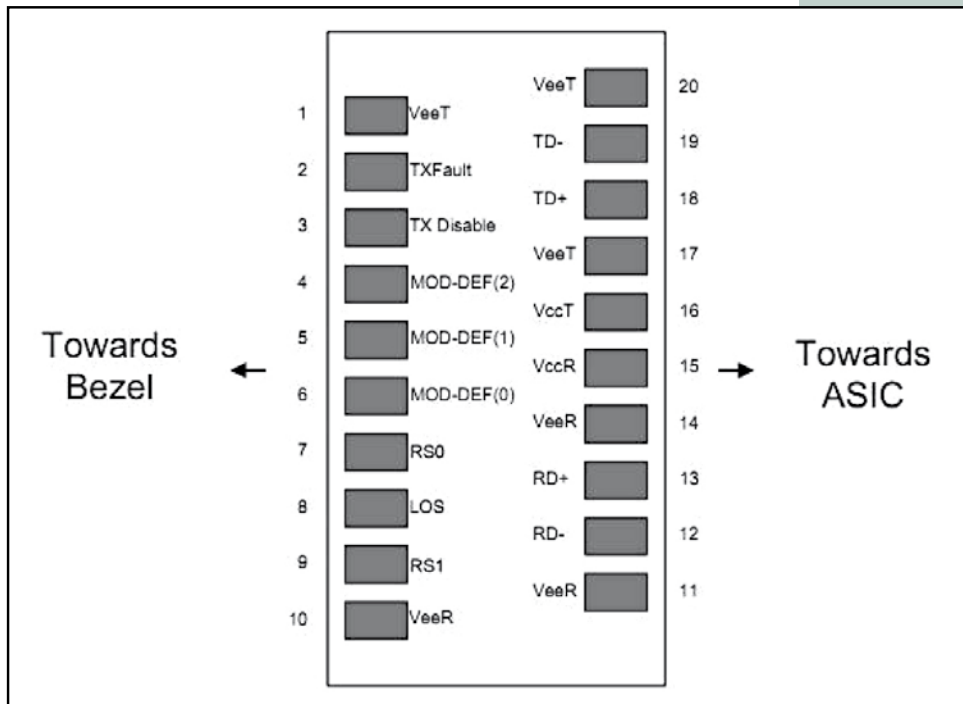


Diagram of host board connector block pin numbers and names

Pin	Symbol	Name/Description	Ref
1	VEET	Transmitter Ground	7.1
2	Tx_FAULT	Transmitter Fault	
3	Tx_DIS [Transmitter Disable. Laser output disabled on high or open	7.2
4	MOD_DEF(2)	Module Definition 2. Data line for Serial ID.	7.3
5	MOD_DEF(1)	Module Definition 1. Data line for Serial ID.	7.3
6	MOD_DEF(0)	Module Definition 0. Data line for Serial ID.	7.3
7	RS0	Rate Select0, optionally controls SFP+ module receiver. When high input signaling rate>4.25 GBd and when low input signaling rate<4.25GBd	
8	RX_LOS	Loss of Signal indication. Logic 0 indicates normal operation	7.4
9	RS1	Rate Select1, optionally controls SFP+ module receiver. When high input signaling rate>4.25 GBd and when low input signaling rate<4.25GBd	
10	VEER	Receiver Ground	7.1
11	VEER	Receiver Ground	7.1
12	RD-	Receiver Inverted DATA out. AC Coupled	
13	RD+	Receiver DATA out. AC Coupled	
14	VEER	Receiver Ground	7.1
15	VCCR	Receiver Power Supply	
16	VCCT	Transmitter Power Supply	
17	VEET	Transmitter Ground	7.1
18	TD+	Transmitter DATA in. AC Coupled	
19	TD-	Transmitter Inverted DATA in. AC Coupled	
20	VEET	Transmitter Ground	7.1

Notes:

- 7.1** Circuit ground is internally isolated from chassis ground.
- 7.2** Laser output disabled on TDIS >2.0V or open, enabled on TDIS <0.8V.
- 7.3** Should be pulled up with 4.7k - 10kohms on host board to a voltage between 2.0V and 3.6V. MOD_DEF (0) pulls line low to indicate module is plugged in.
- 7.4** LOS is open collector output. Should be pulled up with 4.7k -10kohms on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.

EEPROM & DDM THRESHOLD (2 wire address 1010000X(A0h))

0~95 Serial ID Defined by SFP MSA (96 bytes)
96~127 Vendor Specific (32 bytes)
128~255 Reserved (128 bytes)

G DDM THRESHOLD

Parameter	Low Alarm	Low Warn	High Warn	High Alarm
Voltage	2.9V	3V	3.6V	3.7V
Tx Bias	15mA	20mA	80mA	85mA
Tx Power	-5dBm	-3dBm	5dBm	6dBm
Rx Power	-29dBm	-27dBm	-8dBm	-7dBm

H How to order

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